The minicomputer gets some adult software

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Data General says its new system will compete with the big mainframes

Minicomputers have not challenged the big mainframe computer systems in commercial data processing applications primarily because they have lacked the sophisticated software that tells a machine how to perform such tasks. But this week Data General Corp. introduced a commercial minicomputer system with software that it claims is just as powerful as that of a large mainframe EDP system. Moreover, it will sell for a fraction of the price.

Two companies were so impressed that they have already decided to buy the new system and dump their big mainframe computers. Lowe's Cos. decided on Monday to switch its data processing from the traditional computer center operation to a novel "ring" network of seven of the new Data General units. When completed next year, the on-line system will be the first corporate EDP operation converted to distributed processing, Lowe's claims. Finning Tractor Co., one of the world's largest distributors of Caterpillar tractors, is designing a similar interactive, on-line system for its parts business with the new Data General system. Finning has 30 branches spread throughout British Columbia. Its central mainframe computer, a big Honeywell 2000-series model, will gradually be phased out and replaced with the minicomputer network.

The target. Data General's initial marketing push, however, is aimed at selling its new Eclipse C/300 as an extension rather than a replacement of central mainframe EDP systems. And it is not going to compete head-to-head with International Business Machines. "We don't expect our new system to be used as a conventional batch data-processing system," says Francis A. Rowe, Data General's product marketing director.

But such a confrontation may not be as ridiculous as it sounds. It seems clear that, sooner or later, Data General expects to take on IBM. There has been considerable speculation in the EDP industry about distributed processing networks of minicomputers taking over data-processing tasks from the traditional EDP centers. The new Eclipse system seems to be a dramatic and early example of such a trend, as

Rowe explains the fine points of the C/300 to Data General's chairman, Edson de Castro.

increasingly powerful minicomputers with substantial software begin to compete with the powerful but very expensive mainframe computers.

What interests computer users about Data General's new system is a major software package called Infos, which sets up and operates a common "data base" in the system. Here, all of a company's computer-readable data is maintained in a single pool or bank. Until now, says Rowe, a user has had to go to an expensive mainframe computer to get this kind of data management system. The Infos software gives users access to data when they need it through a remote terminal—something that Rowe claims "is not found today on any minicomputer system."

Commercial data processing systems with a common data base have caught on rapidly in recent years because the traditional way of storing data prevents corporate managers from using the information whenever they need it. The problem was that the data from each of the company's user departments was locked up in its own application programs and other departments could not use it.

The market. Data General sees a huge market for systems like its Eclipse C/300. Most big EDP users are now planning to extend data-base systems down to their operational departments, such as distribution and manufacturing, says Rowe. This will create a market "that will be as large as the

value of all data processing systems in use today," he predicts.

The low price of the new Eclipse system should make it easier for operational departments within a large company to justify setting up their own data-base systems. The Eclipse C/300 ranges in price from $80,000 to $160,000, depending on how much memory capacity and how many terminals the customer needs. This represents a significant savings over the mainframe systems that are capable of handling the same job.

Data General's low price was a major selling point at Finning Tractor. "We considered IBM," notes Anthony Harris, data processing manager, "and they quoted us on a Model 370/135 mainframe." But going with IBM would have cost him $1-million, more than three times the Data General bid.

Until last year, Lowe's Cos. controlled its inventory and printed its customer invoices with IBM equipment—card-sorting accounting machines and a Model 370 central office computer that processed the cards once a week. But the IBM system could not keep pace with the North Wilkesboro (N. C.) company's rapidly growing business. Its 125 stores sell building materials and hardgoods in 15 Southeastern states.

So Lowe's decided to go to a retail information system built around Data General minicomputers. In this system, each store has its own minicomputer,

and salespeople use store terminals to get price and in-stock status on the store's 6,000 inventory items.

Each night, a larger Data General mini calls each store, gets sales summaries and inventory information, and sends back stock additions and price changes. This minicomputer is hooked directly to the IBM 370/135 central office system that is used for the data base and batch processing.

Fifteen stores are now equipped with the minicomputer system, and Lowe's is installing four store systems a month. But the system's developer, John Acree, Lowe's data processing manager, wanted a lot more out of his system. "Now all information is batched, with sales and inventories up-

Two mainframe users are already switching to Data General's system

dated in the data base weekly," he says. "There is a lag of seven days, so we're not sure of what's going on."

Acree decided to go to a complete distributed processing system, buying eight of the new Eclipse commercial systems and getting rid of his two IBM mainframe computers. Each Data General machine will handle a departmental function within the company and will maintain the data base for that department. One department's processor will be able to get data from any other department's processor.

Direct system. Acree says that because each department's system will be able to interact with the rest of the company, there will be no need to transfer information manually or perform any batch processing. "Accounts receivable will simply pay an invoice from a supplier, and the act of paying initiates the task by the accounting department computer of posting to the general

ledger," Acree explains.

Acree says that he went to the Data General system because he had "no place else to go." "It would have taken 10 times more money with anyone else," he exclaims. The entire system, including the eight minicomputers and 109 terminals, will cost even less than his present inadequate IBM 370/135 with no terminals, he adds.

Acree can hardly wait to get his new system going. "Now we will be able to query our data base and the information will be less than 1/100th of a second old," he exclaims. "It tells right to the second what's happening."

Committing a company's entire data processing operations to a brand-new system would be frightening to many managers, but not to Lowe's Acree. "It doesn't bother me to pioneer," he says. "I am extremely excited about what we're doing. To my knowledge, no company is doing what I plan to do." ∎

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